REMARKS

Claims 34, 35, 42, and 45 have been amended, and claim 44 has been canceled.

Interview Summary

A telephone interview between the Examiner and Applicants' attorney was conducted on August 30, 2007. Applicants noted that Purdy does not show a process capable of achieving the claimed final density, nor does it show channels in the ring-shaped spacers. The Examiner indicated he would consider withdrawing the rejections if the limitations of claim 35 were incorporated into independent claims 34 and 42.

Rejections Under 35 U.S.C. § 112

Claims 34, 35, 37-45, 47-49, and 51-56 stand rejected as indefinite. These claims have been amended to replace the term "ring-like" with the term "ring-shaped." Applicants request that the rejections be withdrawn.

Rejections Under 35 U.S.C. § 103(a)

Claims 34, 35, 37-45, 47-49, and 51-56 stand rejected under 35 U.S.C 103(a) as obvious over Purdy et al. Applicants have amended claims 34 and 42 to include the limitations of claim 35. As noted in the present application, a "feature of the present invention is that in addition to the reactant gas introduced into enclosed cavity 80, a portion of reactant gas is introduced into the reactor volume 50. This process allows for products with a desirable densified structure produced in a single CVI/CVD process cycle." (Para. [36], lines 4-6). Thus, the use of channels between the enclosed cavity and the outer volume, such as channels in the ring-shaped spacers, allows the process to densify to a density of at least 1.70 g/cm^3 in a single cycle.

As Applicants noted in the telephone interview, Purdy does not teach a process capable of densifying porous structures in a single cycle to an average density of greater than 1.70 g/cm^3. The maximum density gain shown in Purdy is

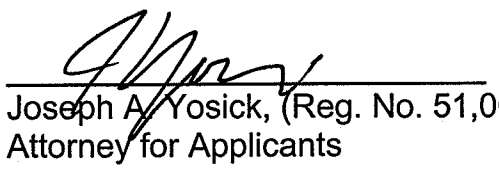
about 1.1 g/cm^3, which added to the initial porous structure density of 0.49 g/cm^3 (see col. 23, line 26) yields a final product density of less than 1.60 g/cm^3, which is significantly less than 1.70 g/cm^3. The invention of Purdy requires at least one additional densification step to achieve the desired final density (see, e.g. Figs. 19-21). Furthermore, Purdy does not disclose providing fluid communication between the enclosed cavity and the outer volume through channels in a ring-shaped spacer. Thus, amended claims 34 and 42, and the dependent claims therefrom, are not obvious. Applicants request that the rejections be withdrawn.

Claims 34, 35, 37-45, 47-49, and 51-56 also stand rejected on the ground of obviousness-type double patenting as being unpatentable over claims 1-53 of Purdy et al. As noted above, the claims of Purdy do not include a process capable of densifying porous structures in a single cycle to an average density of greater than 1.70 g/cm^3 or providing a channel for fluid communication between the enclosed cavity and the outer volume through channels in a ring-shaped spacer. Applicants request that the rejections be withdrawn.

SUMMARY

Applicants believe the present application is now in condition for allowance. If the Examiner has any remaining issues, he is invited to contact the undersigned attorney for the Applicant via telephone if such communication would expedite this application.

Respectfully submitted,



Joseph A. Yosick, (Reg. No. 51,062
Attorney for Applicants

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610
(312) 321-4200